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REMARKS

Dependent claims 3 and 6 have been cancelled, and independent claims 1 and 24 have been amended to include their recitals. The term "net of the capsules" has been replaced by "without said capsules" in each of claims 1, 2 and 24; the units of thickness in claim 19 have been corrected; and commas have been added in claims 1 and 24, all in accordance with the Examiner's helpful suggestions, which are hereby gratefully acknowledged. Since this Amendment does not increase either the total number of claims or the number of independent claims, no additional fee is necessary.

Claims 1, 2, 5 and 16 - 24 are in the application. No claim has been allowed.

Claim Objections

In response to the objection to claims 1 and 24, the expression "consisting of a fire retardant powder covered with a synthetic resin shell" has been set off by commas, as the Examiner suggested. It is believed that this amendment fully overcomes the stated objection.

Claim Rejections - 35 U.S.C. §112

Claim 19 has been amended by changing "between 10 and 200mm" to "between 10 and 200µm," thereby correcting an inadvertent error. Since the latter range of thickness is supported by the specification as originally filed, applicants submit that the rejection of claim 19 under §112, first paragraph, is clearly overcome by this amendment.

Turning to the rejection of claims 1, 2, 5 and 16 - 24 under §112, second paragraph, as indefinite, applicants respectfully submit that the aforementioned amendment herein made to claims 1 and 24, setting off the expression "consisting of a fire retardant powder covered with a synthetic resin shell" by commas, makes clear that the "synthetic resin shell" is an element of the capsules and thus that the "sulfomethylated and/or sulfimethylated phenolic resin" added to the sheet is not the same as the shells. Furthermore, the expression "net of the capsules" has been replaced by "without said capsules," to avoid any lack of clarity. It is believed that these amendments self-evidently overcome the rejection of the claims as indefinite.

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Claim Rejections - 35 U.S.C. §103(a)

Claims 1 - 3, 6, 16 - 19 and 21 - 24 have been finally rejected under 35 U.S.C. §103(a) as unpatentable over WO 02/038374 (Ogawa '374) in view of U.S. patent No. 6,362,269 (Ishihata), U.S. patent No. 6,384,128 (Wadahara) being cited "to show a state of fact."

With reference to this ground of rejection, it may initially be noted that in the invention defined by claims 1 and 24 as herein amended, when the fire resistant fiber sheet is hot molded into a prescribed shape, the fiber having a low melting point may melt and twist around the fire retardant powder so that the fire retardant powder is firmly fixed in the fiber sheet to obtain an excellent stability of the fire resistance of the resulting molded fiber sheet.

Ogawa '374 describes a fiber sheet bounded with a sulfomethylated and/or sulfimethylated phenolic resin, but does not disclose that a fiber having a low melting point below 180°C and fire retardant capsules are added in the fiber sheet, so that the above described effect of the invention defined in amended claims 1 and 24 is unexpectable even for the expert.

Ishihata describes a resin composition comprising a polycarbonate resin (A-1) and a styrene-based resin (A-2) and an aromatic polyester resin (A-3) and it is described that the flame retardant may be added in that resin composition. In the flame retardant, a microencapsulated red phosphorus is illustrated (col. 24, lines 12-51) and red phosphorus is insoluble in water.¹ Red phosphorus is very unstable in the air, so red phosphorus is encapsulated to avoid direct contact with the air. It is described in Ishihata that the fibrous filler (B-1 component) may be mixed in the resin composition but Ishihata does not disclose the fiber sheet consisting of or containing fiber having a low melting point so that the above described effect of the invention defined in amended claims 1 and 24 is unexpectable even for the expert.

Wadahara, cited only as disclosing that red phosphorus is inherently water soluble, discloses an electrically conductive thermoplastic resin composition containing an electrically conductive fiber. U.S. patent No. 5,188,896 (Suh et al.), cited only for hollowed fibers as recited in dependent claim 5, adds nothing to Ogawa '374 and Ishihata with respect to the

¹ Notwithstanding the asserted teaching of Wadahara that red phosphorus is inherently water soluble, the insolubility of red phosphorus in water is well recognized in the art. See, e.g., *Hackh's Chemical Dictionary*, 3d ed., Philadelphia: Blakiston (1944), p. 649, s.v. "phosphorus."

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novel and distinguishing features of the invention defined in claims 1 and 24 as herein amended. U.S. patent application publication No. 2005/0263345 (Erickson) discloses a sound absorbing panel comprising: a sheet composed of a binding agent and fiber, with the sheet having a first side and a second side with each of the first and second side including a scrim layer; and a fabric layer bound to one of the first side and second side with a porous adhesive, but in both references no fire retardant capsules and fiber sheet consisting of an containing fiber having a low melting point are shown.

The characteristic of the invention defined in amended claims 1 and 24 is to fix firmly fire retardant capsules to the fiber sheet by using fiber having a low melting point and this characteristic is not disclosed in any of references. It is therefore submitted that the above-discussed combination of features recited in each of claims 1 and 24 as herein amended distinguishes all the claims now in the application patentably over Ogawa '374, Ishihata, and the other applied references, and any proper combinations thereof.

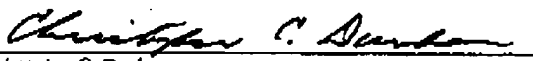
For the foregoing reasons, it is believed that this application is now in condition for allowance. Favorable action thereon is accordingly courteously requested.

Respectfully,



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I hereby certify that this correspondence is being transmitted by facsimile transmission to the U.S. Patent and Trademark Office at (571) 273-8300.


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